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NOTICE OF ALLOWANCE AND FEE(S) DUE

7590 10/06/2009

Ronald Reichman
Pitney Bowes Inc.
35 Waterview Drive
P.O. Box 3000
Shelton, CT 06484

EXAMINER	
ERB, NATHAN	
ART UNIT	PAPER NUMBER
3628	

DATE MAILED: 10/06/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,268	12/15/2003	Matthew J. Campagna	F-707	3839

TITLE OF INVENTION: METHOD AND SYSTEM FOR ESTIMATING THE ROBUSTNESS OF ALGORITHMS FOR GENERATING CHARACTERIZING INFORMATION DESCRIPTIVE OF SELECTED PRINTED MATERIAL SUCH AS A PARTICULAR ADDRESS BLOCK

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1510	$300	$0	$1810	01/06/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

7590 10/06/2009

Ronald Reichman
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I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,268	12/15/2003	Matthew J. Campagna	F-707	3839

TITLE OF INVENTION: METHOD AND SYSTEM FOR ESTIMATING THE ROBUSTNESS OF ALGORITHMS FOR GENERATING CHARACTERIZING INFORMATION DESCRIPTIVE OF SELECTED PRINTED MATERIAL SUCH AS A PARTICULAR ADDRESS BLOCK

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1510	$300	$0	$1810	01/06/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
ERB, NATHAN	3628	705-408000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:

❑ Issue Fee

❑ Publication Fee (No small entity discount permitted)

❑ Advance Order - # of Copies _____

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❑ A check is enclosed.

❑ Payment by credit card. Form PTO-2038 is attached.

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

❑ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

❑ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

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Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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Ronald Reichman
Pitney Bowes Inc.
35 Waterview Drive
P.O. Box 3000
Shelton, CT 06484

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 1326 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 1326 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

Notice of Allowability	Application No.	Applicant(s)	
	10/736,268	CAMPAGNA ET AL.	
	Examiner	Art Unit	
	NATHAN ERB	3628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the Appeal Brief filed 01 July 2009*.

2. ☒ The allowed claim(s) is/are *1-3, 5, 7, 9-11, 13, and 15-17*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a voice mail message from Attorney Ronald Reichman on September 30, 2009.

*****

Claims 1-17 of the application have been amended as follows:

1. (Currently amended) A method for selecting a characterizing algorithm for generating a first characterizing information descriptor for a ~~selected~~ block of printed material on an object, wherein, at a location distant from where said block of printed material is printed, said block of printed material is to be scanned from an object, the block of printed material is to be used to generate a second characterizing information descriptor, the first characterizing information descriptor is to be retrieved from an indicium on the object, the retrieved first characterizing information descriptor and the second characterizing information descriptor are to be compared, the indicium is to be determined to be valid when the retrieved first characterizing information descriptor and the second characterizing information descriptor match to a particular extent, and the indicium is to be determined to be invalid when the retrieved first characterizing information descriptor and the second characterizing information descriptor do not match to the particular extent ~~and compared with said characterizing information~~

~~descriptor at a location distant from where said block is printed~~, said method comprising the steps of:

a) printing said block of printed material on [[an]]the object;

b) applying each characterizing algorithm from a predetermined set of characterizing algorithms to a pristine image of said block of printed material to generate a plurality of corresponding first characterizing information descriptors for said block of printed material;

c) determining, by a computer system, estimates of robustness, with respect to said block of printed material, for each of said characterizing algorithms in said predetermined set to determine which of said characterizing algorithms has the highest estimate of robustness, wherein robustness is a measure of the extent to which a respective characterizing algorithm produces characterizing information descriptors that result in the same above determination of validity or invalidity of indicia for the pristine image of the block of printed material and the scanned image of the block of printed material after the block of printed material has been printed on the object, despite differences between the pristine image of the block of printed material and the scanned image of the block of printed material after the block of printed material has been printed on the object~~is most robust; in order to produce descriptions that match sufficiently when said block of printed material is valid and do not match when said block of printed material is invalid; and~~

d) selecting the characterizing algorithm with the highest estimate of robustness; and~~a descriptor generated by said algorithm and being so determined to be most robust to be used at said distant location~~

e) printing the indicium on the object, the indicium storing the first characterizing information descriptor generated by the characterizing algorithm with the highest estimate of robustness;

wherein the block of printed material is text; and

wherein all characterizing information descriptors are information, describing the block of printed material, which may be stored in the indicium but are not merely the indicium itself.

2. (Currently amended) The method as described in claim 1 wherein said step c) comprises the sub-steps of:

c1) filtering said pristine ~~digital~~ image of said block of printed material with a print/scan filter to create a filtered image, said print/scan filter simulating the expected transformation of said pristine image by printing and scanning processes;

c2) applying each characterizing algorithm from said predetermined set of characterizing algorithms to said filtered image to generate a plurality of corresponding ~~second~~third characterizing information descriptors for said filtered ~~digital~~ image; and

c3) for each characterizing algorithm from said predetermined set of characterizing algorithms, comparing corresponding said first and said ~~second~~third characterizing information descriptors to determine which of said characterizing algorithms ~~is most robust~~has the highest estimate of robustness.

3. (Currently amended) The method as described in claim 2 wherein said object is a mail piece ~~show detection of period~~ and said block of printed material represents an address.

4. (Canceled)

5. (Currently amended) The method as described in claim [[4]]3 wherein said indicium further ~~comprises~~stores information identifying said characterizing algorithm ~~so determined~~with the highest estimate of robustness.

6. (Canceled)

7. (Currently amended) The method as described in claim 1 wherein said object is a mail piece and said block of printed material represents an address.

8. (Canceled)

9. (Currently amended) The method as described in claim [[8]]7 wherein said indicium further ~~comprises~~stores information identifying said characterizing algorithm ~~so determined~~with the highest estimate of robustness.

10. (Currently amended) The method as described in claim 1 wherein said step c) comprises the sub-steps of:

c1) filtering said pristine ~~digital~~ image of said block of printed material with a print/scan filter to create a filtered image, said print/scan filter simulating the expected transformation of said pristine image by printing and scanning processes;

c2) further filtering said filtered image with one or more defacing filters, said defacing filters simulating blots, smudges, failure of print elements or scanner sensors,

or other[[,]] similar, occasional events which can not easily be incorporated into said print/scan filter to create one or more defaced images;

[[c2]]c3) applying each characterizing algorithm from said predetermined set of characterizing algorithms to said filtered image and to said one or more defaced images to generate a plurality of corresponding ~~second~~third characterizing information descriptors for said filtered ~~digital~~ image and one or more pluralities of defaced image descriptors corresponding to each of said one or more defaced images; and

[[c3]]c4) for each characterizing algorithm from said predetermined set of characterizing algorithms, comparing corresponding first characterizing information descriptors with corresponding ~~second~~third characterizing information descriptors and with each of said one or more corresponding defaced image descriptors to determine which of said characterizing algorithms ~~is most robust~~has the highest estimate of robustness.

11. (Currently amended) The method as described in claim 10 wherein said object is a mail piece and said block of printed material represents an address.

12. (Canceled)

13. (Currently amended) The method as described in claim [[12]]11 wherein said indicium further ~~comprises~~stores information identifying said characterizing algorithm ~~so determined~~with the highest estimate of robustness.

14. (Canceled)

15. (Currently amended) A secure indicia printing system for generating and printing an indicium storing a first characterizing information descriptor on an object, said object

having other material printed thereon, wherein, at a location distant from where said other printed material is printed, the other printed material is to be used to generate a second characterizing information descriptor, the first characterizing information descriptor is to be retrieved from the indicium on the object, the retrieved first characterizing information descriptor and the second characterizing information descriptor are to be compared, the indicium is to be determined to be valid when the retrieved first characterizing information descriptor and the second characterizing information descriptor match to a particular extent, and the indicium is to be determined to be invalid when the retrieved first characterizing information descriptor and the second characterizing information descriptor do not match to the particular extent, comprising:

a) a printer for printing said indicium;

b) a processor for receiving a pristine digital image of said other printed material, and for processing said pristine digital image to ~~abstract~~extract characterizing information descriptive of aspects of said pristine digital image from said pristine digital image, said processor being programmed to:

b1) apply each characterizing algorithm from a predetermined set of characterizing algorithms to said pristine digital image of said ~~block of~~other printed material to generate a plurality of corresponding first characterizing information descriptors for said ~~block~~other printed material;

b2) determine estimates of robustness, with respect to said ~~block of~~other printed material, for each of said characterizing algorithms in said predetermined set to

determine which of said characterizing algorithms ~~is most robust~~has the highest estimate of robustness, wherein robustness is a measure of the extent to which a respective characterizing algorithm produces characterizing information descriptors that result in the same above determination of validity or invalidity of indicia for the pristine digital image of the other printed material and the scanned image of the other printed material after the other printed material has been printed on the object, despite differences between the pristine digital image of the other printed material and the scanned image of the other printed material after the other printed material has been printed on the object;

b3) select the characterizing algorithm with the highest estimate of robustness~~a descriptor generated by said algorithm and being so determined to be most robust~~; and

b4) output ~~said selected~~the first characterizing information descriptor generated by the characterizing algorithm with the highest estimate of robustness; and

c) a meter, said meter communicating with said processor to receive said first characterizing information descriptor generated by the characterizing algorithm with the highest estimate of robustness, and having a communications link for receiving other information from another information source[[,]] and communicating with said printer, [[for]]to:

c1) cryptographically ~~authenticating~~authenticate said first characterizing information descriptor generated by the characterizing algorithm with the highest estimate of robustness, and the other information;

c2) ~~generating~~generate said indicium to be representative of said cryptographically authenticated first characterizing information descriptor generated by the characterizing algorithm with the highest estimate of robustness, and the other information; and

c3) ~~controlling~~control said printer to print said indicium on said object; ~~whereby~~

~~d) said object's relationship to said indicium can be verified by regenerating said first characterizing information descriptor from said other printed material and comparing said regenerated descriptor with said descriptor recovered from said indicium, and copies of said indicium cannot easily be used without detection on other objects which do not include said other printed material~~

wherein the other printed material is text; and

wherein all characterizing information descriptors are information, describing the other printed material, which may be stored in the indicium but are not merely the indicium itself.

16. (Currently amended) The secure indicia printing system as described in claim 15 wherein said processor is programmed to carry out said programming step b2) by:

b2.1) filtering said pristine digital image of said ~~block of~~other printed material with a print/scan filter to create a filtered image, said print/scan filter simulating the expected transformation of said pristine digital image by printing and scanning processes;

[[c2]]b2.2) applying each characterizing algorithm from said predetermined set of characterizing algorithms to said filtered image to generate a plurality of corresponding ~~second~~third characterizing information descriptors for said filtered ~~digital~~ image; and

[[c3]]b2.3) for each characterizing algorithm from said predetermined set of characterizing algorithms, comparing corresponding said first and said ~~second~~third characterizing information descriptors to determine which of said characterizing algorithms ~~is most robust~~has the highest estimate of robustness.

17. (Currently amended) The secure indicia printing system as described in claim 15 wherein said processor is programmed to carry out said programming step b2) by:

b2.1) filtering said pristine digital image of said ~~block of~~other printed material with a print/scan filter to create a filtered image, said print/scan filter simulating the expected transformation of said pristine digital image by printing and scanning processes;

b2.2) further filtering said filtered image with one or more defacing filters, said defacing filters simulating blots, smudges, failure of print elements or scanner sensors, or other[[,]] similar, occasional events which can not easily be incorporated into said print/scan filter to create one or more defaced images;

b2.3) applying each characterizing algorithm from said predetermined set of characterizing algorithms to said filtered image and to said one or more defaced images to generate a plurality of corresponding ~~second~~third characterizing information descriptors for said filtered ~~digital~~ image and one or more pluralities of defaced image descriptors corresponding to each of said one or more defaced images; and

b2.4) for each characterizing algorithm from said predetermined set of characterizing algorithms, comparing corresponding first characterizing information descriptors with corresponding ~~second~~third characterizing information descriptors and with each of said one or more defaced image descriptors to determine which of said characterizing algorithms ~~is most robust~~has the highest estimate of robustness.

*****

The abstract of the application has been amended as follows:

A method and system for selecting a characterizing algorithm to be used to characterize blocks of printed material. A digital image of printed material, such as an address block, on an object is obtained, and the image is processed to ~~abstract~~extract characterizing information descriptive of aspects of the ~~other~~ printed material. ~~The characterizing information is combined with other information, such as postal information, and the combined information is then cryptographically authenticated with a digital signature or the like.~~ An indicium representative of the ~~authenticated~~ information is then printed on the object. The object's relationship to the indicium can be verified by regenerating the characterizing information from the ~~other~~ printed material and comparing the regenerated characterizing information with characterizing information recovered from the indicium. ~~Thus copies of the indicium cannot easily be used, without detection, on other objects which do not include the other printed material.~~ A particular algorithm is selected from a predetermined group of characterizing algorithms by determining an estimate for the robustness of each algorithm ~~with respect to small~~

~~changes in the image caused by the printing and scanning process or by defacing of the printed address by blots or the like~~.

*****

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHAN ERB whose telephone number is (571)272-7606. The examiner can normally be reached on Mondays through Fridays, 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on (571) 272-6708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nathan Erb
Examiner
Art Unit 3628

Nhe

/JOHN W HAYES/
Supervisory Patent Examiner, Art Unit 3628

Allowable Subject Matter

1. Claims 1-3, 5, 7, 9-11, 13, and 15-17 are allowed over the prior art of record.

2. The following is an examiner's statement of reasons for allowance:

Claim 1

The closest prior art of record is Whitehouse, U.S. Patent No. 6,005,945, and Mack, Stephen L., "Making a Read on Bar Codes," Managing Office Technology, Cleveland, Jan./Feb. 1998, Vol. 43, Iss. 1, p. 34.

Whitehouse discloses:

- a method for generating a characterizing information descriptor for a selected block of printed material, where said printed material is to be scanned from an object and compared with said characterizing information descriptor at a location distant from where said block is printed;

- printing said block on an object;

- in order to produce descriptions that match sufficiently when said block of printed material is valid and do not match when said block of printed material is invalid.

Mack discloses the choice between different bar code formats.

As per claim 1, the closest prior art of record taken either individually or in combination with other prior art of record fails to teach or suggest determining, by a computer system, estimates of robustness, with respect to said block of printed material, for each of said characterizing algorithms in said predetermined set to determine which of said characterizing algorithms has the highest estimate of robustness, wherein robustness is a measure of the extent to which a respective

characterizing algorithm produces characterizing information descriptors that result in the same above determination of validity or invalidity of indicia for the pristine image of the block of printed material and the scanned image of the block of printed material after the block of printed material has been printed on the object, despite differences between the pristine image of the block of printed material and the scanned image of the block of printed material after the block of printed material has been printed on the object; wherein the block of printed material is text; and wherein all characterizing information descriptors are information, describing the block of printed material, which may be stored in the indicium but are not merely the indicium itself.

Claim 15

The closest prior art of record is Whitehouse, U.S. Patent No. 6,005,945, and Mack, Stephen L., "Making a Read on Bar Codes," Managing Office Technology, Cleveland, Jan./Feb. 1998, Vol. 43, Iss. 1, p. 34.

Whitehouse discloses:

- a secure indicia printing system for generating and printing an indicium on an object, said object having other material printed thereon;

- a printer for printing said indicium;

- a meter, said meter to generate indicium according to a particular descriptor, and having a communications link for receiving other information from another information source, and communicating with said printer;

- cryptographically authenticating said descriptor and other information;

- generating said indicium to be representative of said cryptographically authenticated descriptor and information;

- controlling said printer to print said indicium on said object;

- whereby said object's relationship to said indicium can be verified by regenerating said first characterizing information descriptor from said other printed material and comparing said regenerated descriptor with said descriptor recovered from said indicium, and copies of said indicium cannot easily be used without detection on other objects which do not include said other printed material.

Mack discloses the choice between different bar code formats.

As per claim 15, the closest prior art of record taken either individually or in combination with other prior art of record fails to teach or suggest determine estimates of robustness, with respect to said other printed material, for each of said characterizing algorithms in said predetermined set to determine which of said characterizing algorithms has the highest estimate of robustness, wherein robustness is a measure of the extent to which a respective characterizing algorithm produces characterizing information descriptors that result in the same above determination of validity or invalidity of indicia for the pristine digital image of the other printed material and the scanned image of the other printed material after the other printed material has been printed on the object, despite differences between the pristine digital image of the other printed material and the scanned image of the other printed material after the other printed material has been printed on the object; wherein the other printed material is text; and wherein all characterizing information descriptors are information, describing

the other printed material, which may be stored in the indicium but are not merely the indicium itself.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHAN ERB whose telephone number is (571)272-7606. The examiner can normally be reached on Mondays through Fridays, 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on (571) 272-6708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nathan Erb
Examiner
Art Unit 3628

nhe

/JOHN W HAYES/
Supervisory Patent Examiner, Art Unit 3628